

**Technical Work Group  
of the Imperial Valley Study Group  
Minutes of July 21, 2005 Meeting**

In attendance: David Barajas, IID; Mark Etherton, Mike Paul, KR Saline/IID; John Kyei, CA ISO; Robert Jackson, Dave Miller, SDG&E; Mohan Kondragunta, Phil Leung, SCE; Dale Stevens, CalEnergy; Dave Olsen, CEERT/CEC; Jim Kritikson, for Coral Power. Abbas Abed, SDG&E also attended. The meeting convened at 2:00 PM and adjourned at 4:05 PM. Minutes were recorded by Dave Olsen.

**Minutes** of the June 30, 2005 TWG meeting were approved.

**Post-Transient Analysis:** Robert Jackson reviewed the study results, which SDG&E circulated before the meeting. SDG&E does not yet have the actual curves but will send them out as soon as it receives them. Mohan will send the switch decks for PVD 1 and 2 outages to Robert Jackson. Mark Etherton observed that our Rev 5 base case is stressed more than the others; we will need to point that out in our final report.

**Production Simulations:** We reviewed and agreed on the study assumptions. SCE, SDG&E and IID provided their system peak loads for 2010; John will contact CFE, APS and LADWP to obtain 2010 peak loads for those systems. We agreed that John should proceed with the simulations without unit commitment costs (or unit minimum run times) included, because the timing of SSG-WI's approval of this module in the ABB Gridview model is uncertain. Dale Stevens will provide fuel cost, geothermal unit maintenance cost and forced outage rates to John by the end of this week. (Gridview uses Monte Carlo simulation of forced outages). We agreed that Blythe-Midpoint should be included in the base case.

We also agreed that we will focus on three reports: relative production cost savings among the three alternatives (Alts 2, 2a and 3b); congestion hours (not congestion costs); and losses. We're not in position to be able to estimate absolute production cost savings, and such numbers are most often misinterpreted anyway. The simulation results will help us determine which of the three alternatives to base our phased development recommendation on.

John reviewed the initial flow duration curves he produced for key regional paths. The results (changes in flows and congestion) appear to line up well with the results of our previous studies, an indication that the simulation cases are structured correctly. John will work to have a more complete set of flow duration curves in time for our next meeting.

**Phases 1a/1b Power Flow Study:** The Heavy Summer and Light Autumn base cases, adjusted for 2010 loads, have been reviewed by SCE and SDG&E and are ready to run. SCE will increase EOR flow to 9200 MW. Flows on Path 42 should be about 600 MW. IID confirmed that Phase 1b would not require upgrades between Midway and Highline. IID's plan of service for Salton Sea Unit 6 (on-line 2007/2008), which is included in our base cases, is to connect at Banister, on the L line (Avenue 58-Banister-El Centro). Salton Sea Units 7-9 would tie to Midway.

As previously agreed, the most reasonable development scenario for Phase 1, based on information supplied by CalEnergy, consists of three geothermal plants (Salton Sea Units 7-

9, 215 MW each), on line by the end of 2010. However, to understand how the Phase 1a (Path 42 upgrade) performs relative to Phase 1b (Midway-Highline-El Centro-IV sub), we agreed to study both Phase 1a and 1b with 1,000 MW of renewable generation added in the Imperial Valley as well. After we have these power flow results of the impacts on the SCE and SDG&E systems, and information from the production simulations, we will then have a better basis for deciding the size and timing of each phase. (We might recommend, for example, that the total development be approached as consisting of four phases of roughly 600 MW each).

We agreed that SCE and SDG&E should run the power flows consistent with CAISO 5-year planning criteria, and so will not add in any projects in their respective queues which are not already under construction. This decision, however, was made after Mohan Kondragunta had been called away from the meeting. SCE disagrees with this approach, and will ask the TWG to reconsider using the ISO 5-year planning criteria. SCE believes that all future projects are uncertain, that such projects should receive the same consideration, and that therefore all projects in the utilities' queues should be included in the power flow studies.

This notwithstanding, SCE will run the Phase 1a alternative, with 645 MW of geothermal generation added in the Imperial Valley; and with 1,000 MW of renewable generation added. SDG&E will run the Phase 1b alternative with the same amounts of new generation added.

**TWG Final Report:** Olsen will work with Mark Etherton and David Barajas to develop a first draft in time for discussion at our August 10 meeting.

**Agenda for the next meeting:** At our next (telephone) meeting on August 4, IID will report on two sensitivities it has run: higher EOR flows; and SD Central to SerVal. Mark will circulate these files before the meeting. We will also discuss progress on the Phasing studies, and on the production simulations.

#### **Next Meetings:**

**August 4**, 2:00-4:00 PM, phone meeting. US: 1-888-269-8540; passcode #737122. Mexico call-in: 958002151724.

**August 10**, 9:00 AM- 12:30 PM. In-person meeting, Sempra HQ Auditorium #1(101 Ash Street, San Diego). This is the day after the STEP meeting (now Aug. 9), and immediately before the full IVSG meeting 1:00-4:00 PM on August 10.

**September 1**, 2:00-4:00 PM, phone meeting. US toll-free: 1-877-842-5648; passcode #737571. Mexico toll-free call-in: 958002151724.